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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,989	07/22/2003	Hideto Yamazaki	501152.20017	8168

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EXAMINER

FAISON, VERONICA F

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/624,989

Applicant(s)

YAMAZAKI ET AL.

Examiner

Veronica F. Faison

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7-22-03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Oath/Declaration

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:
It does not identify the citizenship of seventh inventor.

Specification

The disclosure is objected to because of the following informalities: On page 9, line 5 of the specification the word "diglycol" is recited. The Examiner believes this to be a misspelling and should be replaced with --diglycerol--.

Appropriate correction is required.

Claim Interpretation

The Examiner would like to point out that phrase "for ink-jet recording" has not been given any patentable weight because it cites the intended use of the composition.

Claim Objections

There is no literal antecedent basis seen in the specification of the following phrase: "wherein the diglycerol is contained by not less than 50% by weight with respect to the total amount of the water-soluble organic solvent including the diglycerol" in claim 7 (Applicant discloses on page 9, line 7 that diglycerol is not less than 10% and in the examples not more than 34 parts of diglycerol was used in any of the examples

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i.e. examples and comparative examples). The Examiner suggests incorporating the above phrase in the specification or the claim amended accordingly.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 4, 5, 8 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Saibara et al (US Patent 6,013,124).

Saibara et al teaches a pigment ink for ink jet printing comprising a pigment, a polyethylene oxide containing dispersing agent, water-soluble organic solvent, polyethylene oxide and water (abstract and col. 2 lines 7-13). The reference teaches that the polyethylene oxide (polyethylene glycol) and the water-soluble organic solvent which is present in the amount of 8 to 16 percent by weight in the ink composition to avoid nozzle clogging and achieve an excellent printing quality without delaying the drying time (col. 2 lines 38-56). The reference further teaches that when the water is evaporated and the ink is solidified, then the nozzle clogging can be easily be avoided because the solid matters have the soft property that can be dissolved again (col. 3 lines 29-53). The solvent present in the ink composition is a mixed solvent of water and at least one water-soluble solvent which include triethylene glycol, tripropylene glycol and polyethylene glycol (col. 4 line 62-col. 5 line 29). See Embodiments 1-5 wherein the weight ratio of polyethylene glycol with respect to the pigment is not more than 3.

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The reference remains silent to the ink cartridge. However the ink composition is used in an ink jet recording apparatus therefore the ink would inherent be in an ink cartridge. The composition as taught by Saibara et al appears to anticipate the claimed invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 2, 3, 5, 6, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al (US Patent 6,676,736).

Nakano et al teaches a water based ink composition comprising an aqueous medium, at least one colorant selected from the group consisting of (i) polymer particles comprising a dye or pigment and a water-insoluble polymer and (ii) a self-dispersing pigment, and a specific compound A represented by formula (I) which may be used in an

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ink jet printer (abstract and col. 1 line 58+). The colorant is present in the amount of 1 to 30 percent by weight. The reference further teaches that formula (I) which may be include glycerol, diglycerol, and triglycerol which is present in the ink composition in the amount of 0.1 to 50 percent by weight (col. 3 line 66-col. 4 line 1). The ink composition may comprise various known additives including polyhydric alcohol, a dispersant, a defoaming agent, and a pH adjusting agent (col. 11 lines 42-46). The reference remains silent the ratio of at least one of the polyethylene glycol and the diglycerol with respect to the pigment is not more than 3. However with the percentages taught by the reference the weight ratio appears to overlap that which is claimed by Applicant. Nakano et al fail to specifically exemplify the use of diglycerol as claimed by applicant. Therefore, it would have been obvious to one of ordinary skill in the art to use the diglycerol as claimed by applicant as Nakano et al also discloses the use of diglycerol but shows no example incorporating them.

Claims 1-3 and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto (US Patent 6,390,710).

Miyamoto teach an aqueous gel ink comprising colorants, pseudo-plasticizer and aqueous medium. The aqueous medium includes water and water-soluble organic solvents such as polyethylene glycol and diglycerol wherein the content is present in the amount of 10 to 90 percent by weight (col. 3 lines 40-60). The reference further teaches that a pigment may be used as the colorant present in the amount of 1 to 50 percent by weight (col. 4 line 4+). The reference remains silent the ratio of at least one of the polyethylene glycol and the diglycerol with respect to the pigment is not more than 3.

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However with the percentages taught by the reference the weight ratio appears to overlap that which is claimed by Applicant. Miyamoto fails to specifically exemplify the combination of polyethylene glycol and diglycerol as claimed by applicant. Therefore, it would have been obvious to one of ordinary skill in the art to use the combination of polyethylene glycol and diglycerol as claimed by applicant as Miyamoto also discloses the use more than one solvent (i.e. polyethylene glycol and diglycerol) but shows no example incorporating them.

Conclusion

The remaining references listed on forms 892 and 1449 have been reviewed by the Examiner and are considered to be cumulative to or less material than the prior art references relied upon in the above rejections.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Veronica F. Faison whose telephone number is 571-272-1366. The examiner can normally be reached on Monday-Thursday and alternate Fridays 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell can be reached on 571-272-1362. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Veronica F. Faison